

In the Claims:

Please amend claims 1-3, 16-19 and 21 and add new claim 22, all as shown below. All pending claims are reproduced below, including those unchanged.

1. (Currently amended) A tool for cleaning the surface of a workpiece, comprising:

a torch operable to ~~produce~~ maintain a flame via combustion without using an external energy source;

a staging component operable to position the workpiece;

an injecting component operable to inject a reactive precursor into the torch;

a translating component operable to translate at least one of the workpiece and the torch; and
said torch operable to combine a reactive species produced from the reactive precursor chemically with a contaminant on the surface of the workpiece to clean the surface of the workpiece.

2. (Currently amended) A tool for cleaning the surface of a workpiece, comprising:

means for ~~producing~~ maintaining a flame via combustion without using an external energy source;

means for positioning the workpiece;

means for injecting a reactive precursor into the torch;

means for translating at least one of the workpiece and the torch; and

means for combining a reactive species produced from the reactive precursor chemically with a contaminant on the surface of the workpiece to clean the surface of the workpiece.

3. (Currently amended) A tool for cleaning the surface of a workpiece, comprising:

a torch operable to ~~produce~~ maintain a flame via combustion without using an external energy source; and

a translator that can translate at least one of a workpiece and said torch;

wherein said torch is configured to receive a reactive precursor and generate a reactive species capable of chemically combining with a contaminant on the surface of the workpiece to produce a gas and leave the surface.

4. (Previously presented) A tool according to claim 3, further comprising:

a controlling component operable to generate a hydrogen-oxygen flame via the torch.

5. (Previously presented) A tool according to claim 3, further comprising:

a controlling component operable to produce a stream of atomic radicals that can be used to modify a surface via the torch.

6. (Previously presented) A tool according to claim 3, further comprising:

a controlling component operable to produce a stream that can modify a surface by a process selected from the group consisting of cleaning, passivating, and activating via the torch.

7. (Previously presented) A tool according to claim 3, further comprising:

a controlling component operable to produce a stream of atomic radicals that can modify a surface by a process selected from the group consisting of shaping, polishing, etching, planarizing, and redepositing via the torch.

8. (Previously presented) A tool according to claim 3, further comprising:

a flame suppressor in said torch.

9. (Previously presented) A tool according to claim 3, wherein:

said torch includes at least one tube to receive process gas, which can be a fuel or an oxidizer.

10. (Previously presented) A tool according to claim 3, wherein:

said torch includes at least one tube to receive process gas selected from the group consisting of oxygen and hydrogen.

11. (Previously presented) A tool according to claim 3, wherein:

said torch has a central tube for receiving a reactive precursor.

12. (Previously presented) A tool according to claim 3, wherein:

said torch has a central tube for receiving a reactive precursor selected from the group consisting of CF₄, O₂, Cl and NH₃.

13. (Previously presented) A tool according to claim 3, wherein:
said torch has a chemically inert metal tip.
14. (Previously presented) A tool according to claim 3, wherein:
said translator is a rotational stage for supporting the workpiece and rotating the workpiece
with respect to the torch.
15. (Previously presented) A tool according to claim 3, wherein:
said torch includes a multi-nozzle burner.
16. (Currently amended) A tool for cleaning the surface of a workpiece, comprising:
a torch operable to receive a reactive precursor and ~~produce~~ maintain a flame via combustion
without using an external energy source;
wherein said torch further comprises an internal zone where the reactive precursor is
fragmented into a stream of atomic radicals that can be used to clean a surface.
17. (Currently amended) A tool for modifying the surface of a workpiece, comprising:
a torch operable to receive a reactive precursor and ~~produce~~ maintain a flame via combustion
without using an external energy source;
wherein said torch further comprises an internal zone where the reactive precursor is
fragmented into a stream of atomic radicals that can be used to modify a surface.
18. (Currently amended) A tool for cleaning the surface of a workpiece, comprising:

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a torch operable to ~~produce~~ maintain a flame via combustion without using an external energy source;

wherein said torch is configured to receive a reactive precursor and generate a reactive species capable of chemically combining with a contaminant on the surface of the workpiece to produce a gas that leaves and/or modifies the surface.

19. (Currently amended) A tool for cleaning the surface of a workpiece, comprising:

a self-sustaining torch operable to maintain a flame without an external energy source;

wherein said torch is configured to receive a reactive precursor and generate a reactive species capable of chemically combining with a contaminant on the surface of the workpiece to produce a gas that leaves and/or modifies the surface.

20. (Previously presented) A tool according to claim 19, wherein:

the torch is operable to produce a flame via combustion.

21. (Currently amended) A tool that can modify the surface of a workpiece, comprising:

a torch operable to ~~produce~~ maintain a flame via combustion without using an external energy source; and

wherein said torch is configured to receive a reactive precursor and generate a reactive species capable of chemically combining with a contaminant on the surface of the workpiece to modify the surface.

22. (New) A tool for cleaning the surface of a workpiece, comprising:

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a torch operable to maintain a flame via combustion without using an external heating source;

wherein said torch comprises of at least one tube to receive a reactive precursor and at least one tube to receive process gas; and

said torch is operable to combine a reactive species produced from the reactive precursor chemically with a contaminant on the surface of the workpiece to clean the surface of the workpiece.